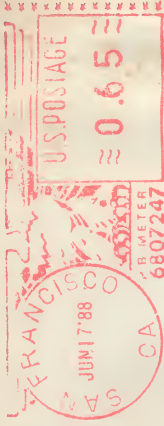




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DESKTOP PUBLISHING™

Bove and Rhodes' Inside Report

VOLUME 3
NUMBER 6
JUNE 1988



The Soft Parade

Microsoft Shows Off New Versions of Leading Macintosh Applications

As market leader, Microsoft has a strong advantage over competing Macintosh software vendors: its massive installed base. Microsoft holds the top slot in the two largest categories of Macintosh software: word processing and spread sheets. However, the company has a credibility problem resulting from a history of buggy programs and a lawsuit with Apple. So what happens when the going gets tough? The tough company goes on parade with new versions of its best-selling Macintosh applications in an attempt to dispel the notion that Microsoft is having trouble producing center-stage quality software for the Macintosh.

This year's parade came nearly two months before the August Macworld Expo in Boston, which in the past has been a watershed show for the announcement of new products. It came on the heels of parades by Ashton-Tate, WordPerfect Corp., and Claris, to announce the shipment of their new word processing programs.

Microsoft has announced Word 4.0 now, even though the product will not be shipped to customers until October. In addition, Microsoft has rolled out version 1.5 of Excel, version 2.0 of PowerPoint, and version 2.0 of Microsoft File, all of which are shipping now. Finally, Microsoft promised improved electronic mail service by establishing strategic relationships with the companies that are implementing "gateways" to other mail services: Alisa Systems (the DEC VAX VMS environment) and Solutions Inc. (MCI Mail, AppleLink, and other popular services).

Word 4.0 is certainly worth Microsoft's effort, because word processing is evolving into document publishing, and Microsoft has listened to their customers. (Many provided a lot of feedback due to frustration from losing data to Word 3.0 or due to brand loyalty.) The preliminary announcement and early demonstrations of Word 4.0 were prompted by the introduction of competing pro-

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- **IBM** introduces PS/2 Model 70 and enhanced Model 50, airs commercials about DTP. Page 8.
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grams from Ashton-Tate (FullWrite Professional), T/Maker (WriteNow), and WordPerfect Corp. (WordPerfect for the Mac). These companies also "preannounced" products well before the ship dates, and all missed their targeted ship date.

Microsoft already battles with WordPerfect for dominance of the PC word processing market, and Microsoft is ready to meet its old nemesis on the Macintosh battleground. However, Microsoft is in an awkward position with regard to Apple, now that Apple's lawsuit is progressing rapidly and with acrimony. Bill Gates can still work up a sweat at press conferences when defending the licensing agreement with Apple for the Windows product, as he demands newshounds to go back and read the fine print in the agreement for answers to their never-ending questions.

To emphasize the theme of team spirit, Microsoft even brought in Chuck Boesenberg, Apple's VP of Sales, to speak at their press conference. Perhaps the move was meant to

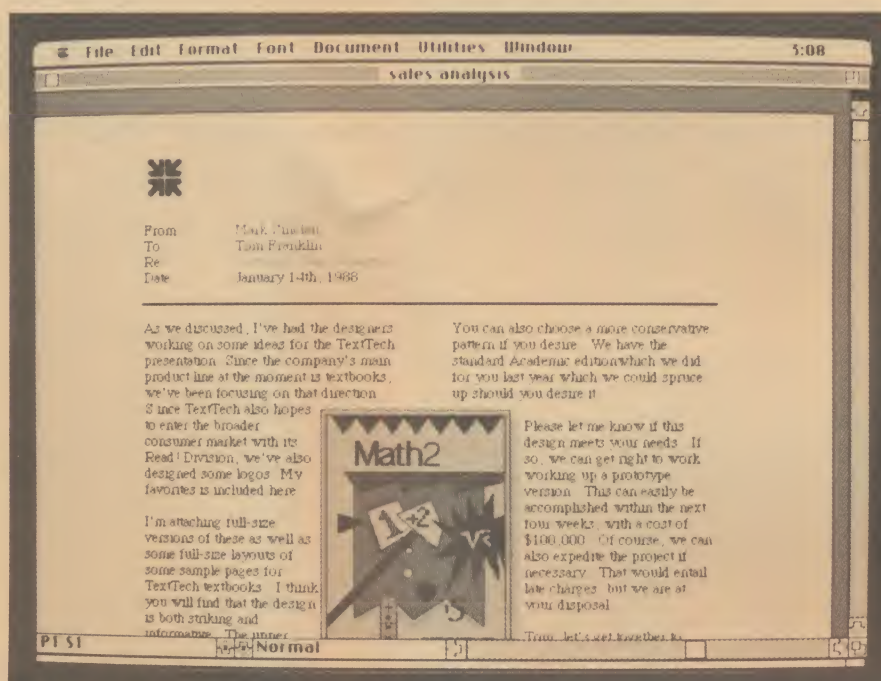
dispel the rumors that the lawsuit may affect Microsoft's relationship as a third-party software developer for Apple. However, it was significant that John Sculley, Apple's Chairman, was not there. Sculley spoke at Ashton-Tate's press conference and has generally been available for major third-party announcements.

The major innovation in Microsoft's new version of Word is its total ability to be customized — representing a significant departure from the "Apple Way" of doing things. Apple likes all third-party applications to use the same Command-key equivalents for menu options, and to have menu options in the same position from program to program. Microsoft is now touting the ability to completely customize all aspects of menu options and Command-key equivalents. Apple can't complain because Microsoft's research shows that users want this feature, and Microsoft still holds first position in the Macintosh applications software market.

Petition The Lord With Market Share

Apple's engineers have always disliked Microsoft's deviations from the "Apple Way" in its Macintosh applications, largely because some of the past deviations have caused crashes in new versions of the System, and Apple's engineers have had to change the System to accommodate Microsoft's applications. Third-party developers of page makeup programs also must support Microsoft's deviations because many users want the ability to import Word files. Most of these programs still can't properly deal with Word's hidden text, fast-saved files, and other idiosyncrasies (see our May 1987 issue, and see "In the Beginning was the Word" by David Morgenstern in BMUG's Fall/Winter 87 Newsletter).

It is with much skepticism that the press views Microsoft's relationship with Apple, since third-party developers rely on Apple to release proprietary information in a timely manner.



Microsoft Word 4.0 can place graphics at any location and text can automatically flow around them. Page View mode shows what you will get when you print, and also allows text editing.

Microsoft now has two strikes against it: its participation in trying to improve IBM's inroads into Apple's markets (which has resulted in a lawsuit), and its insensitivity to Apple's guidelines for third-party developers. In addition, Apple's subsidiary Claris is craving for Microsoft's market share. (A Claris marketing executive was observed at the Microsoft press affair carrying out extra copies of the Microsoft press kits for his buddies. Claris has no trouble getting information from Apple, either.

It used to be unthinkable that Microsoft could be pulled down from its roost as the king of software, but now, evidence of possible weaknesses are everywhere. Microsoft is forging ahead as both a system software company and an applications company, and will therefore continue to rely on strategic partner relationships with competitors. Microsoft leads in Macintosh word processing but only holds second place in PC word processing, and competition is getting fierce in both markets. The company has nearly abandoned its largest customer base (DOS users) to create a new, more powerful system, (OS/2), for DOS users who already run powerful applications on DOS. To increase its new market, Microsoft now relies on IBM to promote its PS/2 line of computers with OS/2. However, clone vendors are unlikely to clone the Micro Channel architecture used in the PS/2, leaving Microsoft between a rock (the DOS world) and a hard place (the lack of applications that make OS/2 worth buying).

Strange days may have found the people at Microsoft, but they seem to be responding with a take-charge attitude and plenty ofchutzpah. Before anyone writes off Word 4.0 due to the onslaught of competition, remember that the majority of Macintosh users (including us) are avid Word users and have a lot of docu-

ments already stored as Word files. Excel is still king of Macintosh spread sheets, and PowerPoint 2.0 is a hot product. The music is far from over for Microsoft; in fact, its leadership position in Macintosh applications will likely remain intact, despite T/Maker's, WordPerfect's and Ashton-Tate's best efforts.

Word 4: The Changeling

Word 4.0 (\$395, \$75 for the upgrade) appears to be a redesign of the program that offers, for the first time, a page preview mode in which you can create and edit text as in regular text editing mode. The most interesting new features are displaying and printing color text, table formatting, and extensive customizing controls. Microsoft will also include the Word Finder thesaurus, the AutoMac macro program, and the QuickSwitch feature that loads Excel for an automatic data link (so that you can incorporate and update charts and spread sheets).

Table formatting in Word 4.0 is a breeze. Each table element can be formatted as an Excel spread sheet cell, with text automatically wrapping around each line, and justification options. The program offers an adjustable grid for quick alignment of columns, and you can change the size of any selected table cell or cells by dragging ruler markers. Graphics and text can be mixed in tables, and table cells can be highlighted with special borders for effects such as boxed sidebars, and floating or boxed graphics.

Page layout features include the ability to lock an object in an absolute position, and automatic wrapping of text around graphics. You can quickly assign styles to paragraphs by clicking a small menu on the ruler that lists defined style sheet names, and it is

even easier to define styles by example. Word 4.0 offers the usual batch mode repagination for users in a hurry, plus an automatic repagination mode for those who need to see where the page breaks will fall while writing or editing.

Outlining is improved and you can now move a large section of text to another place in a document quickly by dragging in the outline view. Microsoft improved the method of tagging words to be used as index and table of contents entries — now you can select the word or phrase and simply press a single Command-key combination.

Some of the most useful features of the revised visual interface for Word 4.0 are nine "hot spots" where you can double-click to perform automatic operations. For example, you can double-click hot spots and go to any page, edit footnotes, change tab settings, and display split windows.

The most talked-about feature is its potential to be customized to suit each user or to suit a standard established for a set of users. You can change to your liking every keyboard equivalent for all menu options, and also add and subtract menu options. Word 4.0 provides a menu option for listing all the operations and assigned keyboard equivalents, and you can also store and retrieve specific menu-keyboard assignments.

Microsoft is committed to enhancing the data exchange capabilities of its products. Word 4.0 can display the merge fields in a Microsoft File data base for use with Word's merge-print option (a significant option required by users who need to produce form letters or reports from a data base, and for publishing data bases). Word 4.0 and PowerPoint 2.0 share the same user dictionaries (PowerPoint lets you check the spelling of text on your slides), and Microsoft Mail can be used from within Word 4.0 so that you

can send Word files as messages without losing formatting and style sheet assignments.

The only major omission is the inability to import and export rival formats such as T/Maker's WriteNow and Living Videotext's MORE (it would be particularly nice to import a MORE outline into Word's outlining mode).

Microsoft advertises Word as a desktop publishing application, and it has all the features required for long document printing, but it does not appear to have a complete set of page makeup features. Like FullWrite, Word offers extensive page layout features not found in other word processors (for example, multiple columns). However, like FullWrite, Word suffers from the inability to start more articles on a single page — text snakes automatically from one column to the next, and there is no way to stop halfway down a column on page one and continue the same article on another page, while starting a new

column of text on page one. Therefore, pages for newsletters, magazines, and many other publications can't be prepared in Word 4.0 except as galleys of text that require manual paste-up, which defeats the purpose of electronic page makeup.

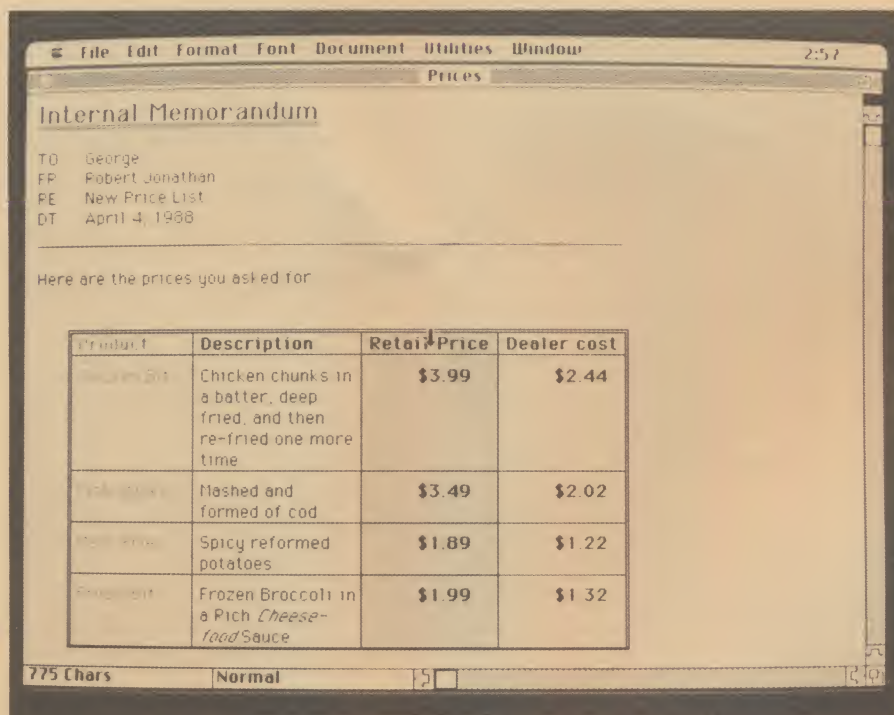
Although the production of manuals and books could theoretically be automated by document processors like Word and Ashton-Tate's FullWrite Professional, neither has enough typesetting controls for commercial publications that require composition-style typesetting. (Page makeup programs offer such controls and are still preferred by book publishers.) Word 4.0 will offer manual kerning (although we haven't seen it demonstrated), but not automatic kerning or letter and word spacing controls.

There was no evidence of revision tracking, chapter-style orientation, or special sections such as a bibliography, all of which are found in FullWrite. However, FullWrite

performs poorly if your Macintosh has less than two megabytes of RAM, whereas Word 4.0 is designed to run with as little as 512K (we will wait for the final released version for performance comparisons).

Microsoft is playing it safe and not releasing Word 4.0 until it is bug-free. The company was stung by criticism last year when it released Word 3.0 prematurely. Version 3.01 corrected most of the bugs in the premature 3.0 version, but users still complained about performance, inadequate outlining features, clumsy mechanisms for tagging index and table of contents entries, and the general lack of page layout features.

Microsoft has addressed all of these complaints with what appears to be a solid, revitalized version of the program. The bonuses of excellent table formatting and user customization make Word 4.0 a winner; that is, if its competition doesn't catch up by October.



Microsoft Word 4.0 has excellent table formatting features, and treats each table element as a spreadsheet cell for individual formatting. Tables can be used to lay out columns of text and graphics, and you can place borders around table elements.

The Big Sweep-up

Version 1.5 of Excel (\$395, \$25 for the upgrade) also has the user-customizing capabilities, plus it offers innovative dynamic data relationships and data exchange capabilities for spreadsheets. PowerPoint 2.0 offers flexible color and layout tools for presentation slides. Together with Microsoft Word, these two programs provide Microsoft with the strongest selling software product line available.

Microsoft File, which is not the best data base product on the market, is nevertheless useful for mailing lists and many other data base applications. It also ties directly into Word for print-merge operations, synergistically making the combination the best tool for data base publishing on the Macintosh.

PowerPoint 2.0 (\$395, \$40 for the upgrade) is a major upgrade, featuring access to all 16.7 million colors of the Macintosh II, a spelling checker that refers to Word's supplemental user

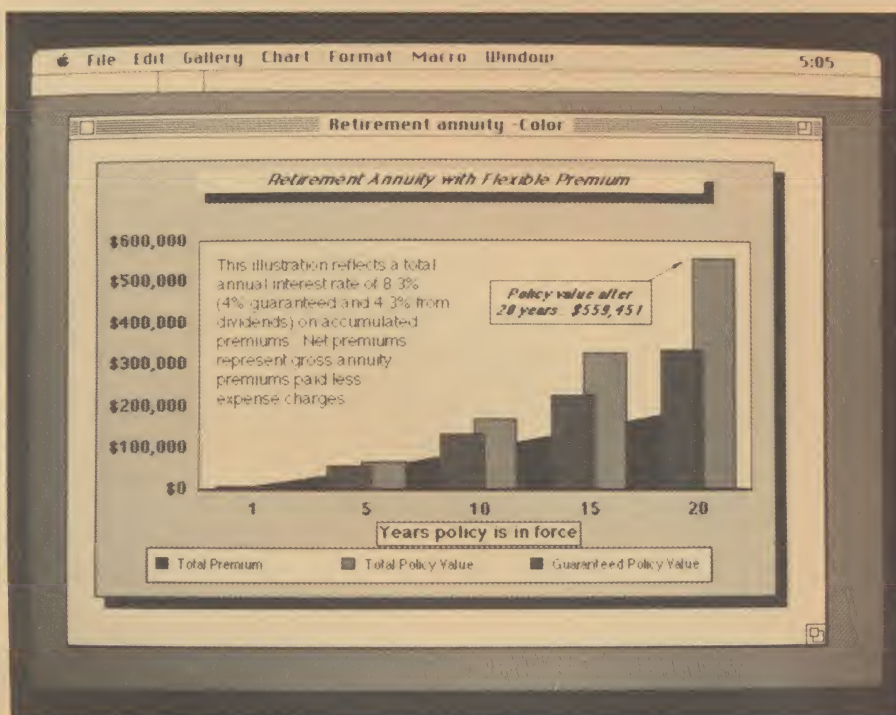
dictionary, and the ability to import graphics from a variety of sources, including Encapsulated PostScript files (from Adobe Illustrator, Aldus FreeHand, LaserPaint, and even DOS programs that save in EPS format). Microsoft has an agreement with Genigraphics to provide PowerPoint slides via modem to produce fast 35mm slides at Genigraphics service centers.

PowerPoint 2.0 offers several intelligent coloring options, such as gradations (or "bleed-offs") that use the slide title as the center of the gradations of color. Also, when you specify the background color of a slide, the program suggests complementary colors for the text. You can define and store color schemes for presentations, and merge slides from other presentations into a new presentation, and the slides will automatically take on the color scheme of the new presentation. Additional colors can be added to the menu, and any color can be substituted for any other

color automatically. Microsoft offers a special palette that matches Genigraphics colors.

Although PowerPoint 2.0 can import an outline from Living Videotext's MORE, it can't import an outline from Word. This omission may be addressed in the future, but otherwise PowerPoint packs as much of a punch as any other slide presentation program currently shipping. Competition is shaping up with Manhattan Graphics (ReadySetShow!), and Cricket Software (Cricket Presents...) is a formidable opponent that is gaining in market share. (We intend to compare PowerPoint 2.0 and other desktop presentation programs in a future issue.)

However, none of these companies has the clout of Microsoft, even if Microsoft's reputation appears to be uneven (which is as much Microsoft's fault for playing cloak-and-dagger with the press as it is the fault of the press for relating reports of the bugs in



Microsoft Excel version 1.5 provides extensive chart and graph customizing and full color.

(continued on page 7)

News Analysis

Scitex Visionary Color Layout System

Scitex America announced the Scitex Visionary design and composition system for the Macintosh II, which is reportedly based on Quark's XPress page layout program and uses 36 Bitstream fonts for screen display and proofing. Scitex Response Systems at service bureaus can produce output with Bitstream fonts.

The system comes in several configurations including the Gateway (around \$80,000 including a four-megabyte Macintosh II computer, Mitsubishi color thermal printer, color monitor, and 80-megabyte hard disk) and the Primary Design Station (around \$31,000 including a four-megabyte Macintosh II, color thermal printer, color monitor, Sharp color scanner, and 80-megabyte hard disk). Both configurations are expected to be sold to Scitex service bureaus; a low-cost configuration for customers of these service bureaus includes a four-megabyte Macintosh II (around \$13,600). The Visionary software, priced separately, is \$8000 (sliding down to \$2500 each copy for a site license with over 50 users). Configurations are linked by an AppleTalk network on an Ethernet backbone.

Designed for Scitex service bureaus to "lock in" their corporate and professional customers, the Visionary system is not considered a major advance in desktop prepress because color layout can be accomplished with less expensive systems that offer more flexible output choices. Competitive layout systems are available from Lightspeed, Unda, Imapro, and others, and many competitors offer lower-cost Linotronic separations as well as links to Scitex and other high-end color electronic prepress systems.

The Scitex Visionary system produces pages that can be output on Scitex Response Systems at service bureaus (such systems typically cost over a million dollars and can produce separations that are customized for specific printing presses and inks). XPress users may be able to transfer XPress pages via the Handshake protocol to the Scitex Visionary system — apparently, the Visionary system will not accept XPress files directly, and can't make use of PostScript printers such as the Apple

LaserWriter IINT and IINTX models. Visionary will be sold only by authorized Scitex User Group members.

See our April 1988 issue, "The Rainbow Coalition," for a description of the Scitex-Quark agreement and the Scitex-Adobe Systems agreement, and for an analysis of color prepress on the desktop.

All Eyes Fixed on NeXT

The industry is anticipating the introduction of the NeXT workstation by Steve Jobs in July. The machine reportedly runs the Mach Operating System, developed at Carnegie-Mellon University, which is designed to replace Unix and offer new features and support all Unix system calls for compatibility with Unix applications. Carnegie-Mellon officials expect a NeXT announcement in July and shipment to begin before the start of the fall semester.

Although the Mach OS is not Unix, it is compatible at the binary level with BSD 4.3 Unix and essentially does everything Unix does. Sources close to Sun Microsystems concede that Mach OS is a vast improvement on Unix, offering virtual memory, secure communications, distributed processing over a network of workstations, interprocess communications, and the ability to run several different visual interfaces rather than one command line interface (as with Unix and DOS). The system uses an object-oriented paradigm with elements similar to Smalltalk's messages and actors.

Sun Microsystems's NeWS and Open Look interface could be implemented for Mach as could the Presentation Manager or Macintosh Finder. Since the Mach OS offers memory management that provides more independence from the hardware platform than Unix provides, it has been easy to transport the operating system to the Macintosh II, the Sun3, the MicroVAX II, the IBM RT, and other workstations. Many view Mach as a replacement for Unix, but the new system has not had as many years of use and experience to have all of its bugs worked out.

(continued on page 13)

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Word 3.0). Microsoft is still the leader in system software and is one of three primary players in application software for personal computers, and its innovations will continue to carry it forward to set standards for both system software and applications.



New Cloners of the PostScript Page

Until recently, the only way to make a faster PostScript interpreter was to employ software shortcuts that sacrificed quality as well as compatibility with Adobe's PostScript.

Now the stakes are rising as graphics coprocessors offer faster computation for imaging the page without the need to freeze the page description language in the hardware where it can't be easily upgraded.

The XL-8200 series chip set from Weitek can be programmed in C to support multiple page description languages in the same printer, so it is theoretically possible to combine PostScript with another imaging model, such as Hewlett-Packard's PCL or Apple's QuickDraw, inside the printer or display. The fast operation makes the Weitek chip set a godsend to several PostScript clone vendors such as Phoenix Technologies, Bauer, CAI, and Media Net.

Credibility has not been the strongest suit of the vendors of PostScript-compatible raster image processors (RIPs) for laser printers and imagesetters. Doubt was first cast by Adobe Systems, the creator of

PostScript, who obviously has much to gain by criticizing the efforts of companies that do not use Adobe's RIPs. Credibility of these vendors started to improve when several PostScript clone vendors announced the start of independent testing. However, their credibility would not be an issue if clones were available to the press for evaluation, but so far only Imagen has provided an evaluation unit. We are eagerly awaiting the PostScript clones and will publish our evaluations as soon as possible.

The doubt about PostScript clones has centered on two central issues of Adobe PostScript compatibility: (1) the difficulty of achieving one hundred percent compatible results with complex graphics, shades, and tints, and (2) the inability to use the same font outlines in both laser printers and higher-resolution imagesetters. These doubts, combined with the observation that the demonstrated clone RIPs that are faster than Adobe PostScript RIPs usually cost more, not less, are leading printer manufacturers to wonder why they should adopt PostScript clone RIPs if they are not better *and* cheaper.

Signed, Sealed, and Delivered

The two PostScript clone products currently shipping are from Conographic and Imagen. Conographic has come the closest to providing both price and performance benefits in its ConoDesk 6000 (however, evaluation units are not yet available to validate speed and compatibility claims). Frank Lee's independent testing firm, set up to test clone RIPs for PostScript compatibility, has already certified the ConoDesk 6000's ConoScript mode as being completely compatible with version 47 of Adobe's PostScript interpreter.

The ConoDesk 6000 printer controller is a single-slot board for a PC XT or AT that uses a proprietary processor and 2.5 megabytes of dynamic RAM. The controller offers two modes of operation: PersonalScript, which is optimized for single-user printing, and ConoScript, for printing Encapsulated PostScript and PostScript files.

PersonalScript offers font metric compatibility with the LaserWriter's standard 13 fonts and incredibly fast operation, but this mode essentially bypasses PostScript entirely by directly interpreting the data files created by PageMaker, Ventura Publisher, and Microsoft Windows applications. The speed benefit is outweighed by the disadvantage of not being able to use PostScript files and fonts.

ConoScript, on the other hand, is PostScript-compatible and has been demonstrated to be faster than the Apple LaserWriter when using Conographic's fonts (which are width-compatible with the LaserWriter's standard 13 fonts). As for compatibility with Bitstream and Adobe PostScript fonts beyond the standard 13, Conographic promises upgrades. The company says it has superior font technology that does not require any special hints for scaling at low resolutions.

Imagen's PC Publisher's Kit, designed as an add-in board for the Hewlett-Packard LaserJet Series II, prints text very quickly but prints PostScript and bit-map graphics very slowly, according to *InfoWorld's* test results (May 30, 1988 issue). However, it is more versatile, offering both LaserJet and PostScript compatibility. We will soon have the opportunity to verify Imagen's PostScript compatibility and performance claims.

The Crystal Chip Set

Weitek, a company that designs specialized graphics chips, is offering a super-fast chip set that can turn an ordinary PostScript printer into a speed demon, pumping out pages at the rated speed of its engine. Therefore, we may see PostScript-compatible printers on the PC side of the market that can print over thirty-times faster than the Apple LaserWriter Plus, at a price that is about \$1000 cheaper than the AST TurboLaser. The same chip set could be used to make an \$1800 printer that has five times the speed of the LaserWriter Plus. Weitek also claims that the chip set can be used for displays.

Weitek's background is in designing algorithms in microcode for graphics chips used in specific, highly computational applications such as three-dimensional solid modeling. The company has a unique opportunity to apply its RISC processors and know-how to general printing applications.

Weitek's chip set helps any page description language operate faster when doing complex computations. PostScript graphics and special effects require a lot of computation that slows down the printer or display interpreter. Although a high measure of MIPS (million instructions per second) is important, equally important is the neglected area of MFLOPS (which does not stand for mega-failures but for million floating point instructions per second).

For example, for one Bézier curve, a PostScript interpreter has to compute around twenty floating point instructions per point. Assuming about twenty curves per character, and 250 characters per font, the number of computations for a range of font sizes from 10 to 24 points is around 8.7 million. Weitek's XL-8200 chip set can perform eight parallel operations with single-cycle execution for an input/output speed of 100 megabytes per second, which provides two to

eight MIPS, and 0.2 to 1.0 MFLOPS.

An attractive benefit for printer manufacturers is that Weitek offers one hardware architecture that manufacturers can use in a range of printing and typesetting products. No longer would printer manufacturers have to employ different CPUs to make a faster printer. Weitek also offers its PostScript-compatible HyperScript interpreter so that manufacturers can jump into the game quickly without having to develop their own interpreter.

With the printing on the wall, Adobe Systems recognizes that some PostScript customers will want to use these chips, even if Adobe does not. Bauer, CAI, Media Net, and Phoenix Technologies intend to use the chips to speed up their PostScript-compatible offerings, and several large printer manufacturers (DTC, Qume, Panasonic, NEC, Hanzon, and Genicom) have become Weitek customers. Bitstream and The Company/URW will supply outline fonts with scaling technology, and NIS will provide Kanji character sets. The design of Weitek's HyperScript processor is already finished and samples are currently available to help these customers get their printers to market quickly.

Adobe Systems takes pride in its innovations and the quality of its font scaling technology, but the company must consider incorporating outside development efforts such as Weitek's when they provide such dramatic speed and price benefits. The combination of PostScript, low cost, and fast operation is irresistible.

Weitek offers chips that can speed up PostScript printers to operate faster than 30 times the LaserWriter Plus.

Has IBM Seen the Light?

Will IBM continue to be the target of criticism for the company's weak offerings in publishing, or will it bounce back with a faster and sexier computing platform that can stand up to the competition?

Currently Apple has the lead in platforms and printers for desktop publishing. PC clone manufacturers (AST Research, Compaq, Tandy, Zenith, etc.) offer the best platforms for running DOS programs for desktop publishing, and the printer companies (AST Research, Hewlett-Packard, QMS, etc.) offer the best laser printers.

IBM does not dominate the market for publishing systems as it has dominated other markets. IBM's mainframe publishing system was not as successful as other composition systems, and the PS/2 Solution Pacs for desktop publishing are not as widely used as when the same software (PageMaker with Microsoft Windows) is installed on AT-compatible computers from other vendors. IBM's Model 4216 Personal Page Printer recently ranked the lowest in an *InfoWorld* comparison of nine PostScript printers.

However, this may be the year that IBM steps into the spotlight with new publishing systems. First IBM announced that Interleaf Publisher would be bundled in a Solution Pac for professional publishing. Then, this month, IBM rolled out its desktop PS/2 Model 70 offerings, based on Intel's 80386 processor running at 16, 20, or 25 megahertz, and a faster Model 50 based on the 80286. Prices for all PS/2 models were decreased.

IBM's move from the AT-style bus (now called the "classic" bus) to the Micro Channel bus has split the DOS

world into two compatibility camps: one for the twelve million or more XT and AT computers using the classic bus, and one for IBM's Micro Channel PS/2s. These two camps were further defined by the latest news that two powerful clone vendors, Compaq and Zenith, have no plans to make Micro Channel machines because they don't believe performance is good enough.

This is good news for IBM, which has been counting on this state of confusion to delay would-be Micro Channel cloners while IBM gains a significant market share with its high-end PS/2 Models 50 and 70. While the rest of the industry suffers from a severe DRAM chip shortage and rising costs, IBM has introduced the fastest Micro Channel PS/2 machine and slashed costs of its other models, thus ensuring healthy sales for the remainder of the year. IBM can do this because IBM manufactures more than fifty percent of the DRAM chips it uses in PS/2 machines.

Compaq and Zenith may have to change their plans by year end and release Micro Channel versions if IBM's strategy succeeds. Tandy, Dell Computer, and others have jumped on the Micro Channel bandwagon already. IBM will have to contend with clones eventually, but clone announcements will actually help IBM establish the Micro Channel as a standard, and the current DRAM chip shortage leaves IBM in the catbird seat. This year could be IBM's best for PS/2 sales, and this success could breathe new life into IBM's desktop publishing Solution Pacs.

IBM Lights DTP Fire

IBM is at least capable of introspection and, if the company has become aware of its failings in desktop publishing, it may be quickly moving

to correct them. IBM's awareness of its own problems is evident in the company's recent TV commercial about desktop publishing. The commercial mentions some of the weakest areas of IBM's offerings as if they were the weaknesses of some other machine. You have to give the advertising agency, at least, credit for listening to some of the complaints about PC-based desktop publishing.

The commercial shows the Radar character from MASH smugly dismissing a hyped-up desktop publishing system as no different from IBM's standard offerings ("fast and easy they say? You mean like this?"), and goes on to say that IBM's solution does not have to be "rigged" to work with their business computers. Then, the Trapper character, responding to a call from some unknown vendor, is gently but consistently rebuked by Radar, who resembles a data processing manager.

The roles from the original MASH TV series are reversed: the preppy Trapper used to be the dominant (and humorous) personality that Radar looked up to, and Radar was the over-enthusiastic nerd. Now IBM has invested Radar with the keys to the data processing kingdom, and Trapper has to grovel as the dumb, over-enthusiastic straight guy. The subliminal message is that the preppy (or yuppie), business school graduate-type

|||||

*IBM's Personal Page
Printer recently ranked the
lowest in an InfoWorld
comparison of nine Post-
Script printers.*

guy is not savvy — the good-looking guy who likes Apple and Compaq should not make the buying decisions for your business — leave the decisions to the data processing managers, the ultimate nerds.

The commercial has Radar moving at lightning speed through PageMaker on a PS/2 and saying that it is already easy to use. However, we have not so far seen a demonstration of PageMaker on any model PS/2 that runs as fast as depicted in the commercial. Then Radar shows a page of a newsletter claiming that it already has increased productivity. Finally, in response to the claim that some other desktop publishing system could be "rigged" to work with their other systems, Radar says that he doesn't have to "rig" his. This not-so-subtle slap at Apple is apparent.

Finally, Trapper tells the caller that desktop publishing is not for their business. The implication: don't buy a system because it does desktop publishing, because any IBM system can do desktop publishing, even its Model 30 (which we have written, in previous reports, is inadequate for desktop publishing). This commercial uses PageMaker, the leader in desktop publishing application software, to prove its point.

One funny thing is, all of these problems were cited as criticism of IBM's offerings. IBM's Solution Pacs, demonstrated at trade shows, were noticeably slower than other systems. The Personal Laser Printer is the least flexible printer of its type; it has to be rigged to work with anything other than a PS/2.

Yet IBM recognizes the importance of desktop publishing. Another TV commercial has the Klinger character (properly dressed as a male) trying to enter a computer store while business-type buyers are leaving with boxes of IBM equipment and third-party software.

The first set of software to leave the store flashes by so fast that you can't really read the names of the products, but you can recognize the packaging on three of them (Microsoft, Lotus and Ashton-Tate).

The next set of software, however, lingers on long enough for you to clearly read *PageMaker* on the Aldus package. The voiceover never mentions desktop publishing, but there is some mention of using graphics and getting pages to look right. This commercial also uses *PageMaker* to prove the point that IBM's computers are the best for desktop publishing.

No doubt IBM's upper management lit a fire under the group responsible for producing publishing systems. If IBM applies some of what the industry has learned about visual interfaces in the last few years, and makes *Presentation Manager* better than the current version of Microsoft Windows, the company can establish successful platforms for desktop publishing that can effectively compete against the Macintosh product line.

Trying to Set PCs on Fire

Open systems are excellent in concept but difficult to produce in a competitive market. Proprietary systems offer a level of functionality that effectively becomes a level of expectation. Thus, the proprietary Macintosh technology was developed with an eye toward an elegant design that permitted the convenient storage of fonts, the use of the clipboard and scrapbook for data exchange, and standard connectors for hard disks and networks. These three convenience factors, along with a square-pixel display and resolution-independent printing technology, gave Apple its lead in desktop publishing.

While the rest of the industry suffers from a severe DRAM shortage and rising costs, IBM has introduced their fastest PS/2 machine and slashed costs of its other models. IBM can do this because it makes more than half of its own DRAM chips.

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The competition's problem is, how can any one company offer such an environment with basic XT hardware and DOS? Digital Research's GEM (Graphics Environment Manager, which is used by Xerox's Ventura Publisher and Laser Friendly's The Office Publisher) and Microsoft's Windows (Aldus *PageMaker*, Micrografix Designer, and other publishing applications) are the functional equivalents to the Macintosh environment, but there are still many problems associated with using them.

For example, to get decent performance and make efficient use of your hard disk, you must pick one application (such as Ventura Publisher) and optimize everything else in deference to it (for example, banish other applications' fonts and network file-serving). However, if you want to use more than one page makeup program, you pay the price and must contend with at least the headache of storing an entirely different set of fonts (which require large amounts of disk space).

By contrast, the operating environment of the Macintosh is well suited for desktop publishing, with its System file containing fonts for all applications; the standard usage of cut,

copy, and paste functions by applications; the standard graphics formats; and the richness of its Clipboard and Scrapbook.

Microsoft Windows comes the closest to offering this environment on PC ATs, but its implementation is not complete, and there are not enough applications available at this time to take advantage of it. For example, there is no universal Scrapbook that every application supports (although T/Maker offers a utility with its clip art that resembles one), and the Clipboard does not allow the transfer of information to all other applications. The list of graphics formats for PC-compatible applications has only been lengthened over time, not shortened.

What if you want to use Linotronic or other PostScript typesetters at the maximum resolution, with pages that use downloadable fonts and bit-map graphics? In some cases the only way to typeset such pages is to store the downloadable fonts on the Linotronic's hard disk, but many PC programs have trouble with downloadable fonts and don't offer this capability. Page makeup programs produce large files, and with the use of many font files it becomes too much to handle without hauling your hard disk into the typesetting service. Besides, the alternatives in the PC world encourage you to get the inexpensive LaserJet printer for proofing, which can make font management more complicated.

Macintosh screen fonts are provided in the system, and font downloaders are available to store any PostScript printer fonts on the Linotronic's hard disk. It is also easier to walk-into a storefront typesetting service with a portable SCSI hard disk, plug it into any available Macintosh through the SCSI port, and

immediately start using an entire disk's worth of software and fonts, without copying a single file to another disk. You can't do that with a PC unless the typesetting service has the same hard disk controller card, or the service doesn't mind taking off the cover of the PC and monkeying around with screwdrivers to insert a board-based hard disk. Such methods have no chance of becoming a standard in the proprietary world of PC hard disk interfaces. PC users are forced into inefficient alternatives such as clearing hard disk space on the service's computer and copying fonts and software from floppies or tape backup cartridges.

Networking for publishing is also much easier with AppleTalk — you can share a laser printer and all of its fonts simply by connecting the cable, without using ".BAT" files or boards with hardware interrupts that may interfere with the system. Every Macintosh has a built-in network connector, every LaserWriter and Linotronic has the ability to handle multiple print jobs, and AppleTalk allows the printers to report back to users and tell them when to add paper. The only networks for PCs that offer this much functionality for so little a price tag are all based on AppleTalk anyway: TOPS, Tangent's PC Mac-Bridge, and Apple's AppleTalk PC Card.

File management on the Macintosh is easier to learn than DOS subdirectories. The Macintosh presents a desktop with folders and files that can be organized alphabetically, by date, by size, or by the position of its icon. Folders and files are easy to recognize because they have descriptive 25-character names rather than eight-character mnemonics as with DOS.

With IBM's PS/2 computers, we are no longer faced with the questions

If IBM applies what the industry has learned about visual interfaces, and makes Presentation Manager better than the current version of Microsoft Windows, the company can establish itself in desktop publishing and compete effectively against Apple.

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of: whether or not a mouse is better for desktop publishing; whether or not we need a square pixel ratio for the display; and whether or not fonts should be displayed on the screen for a "what you see is what you get" effect. All of these features are now standard on IBM's PS/2 Model 50 and higher models, so we know that IBM considers these features necessary. However, even if IBM's OS/2 becomes the standard system for high-powered PCs and PS/2 computers (replacing DOS), it is still stuck with eight-character names for files and subdirectories.

IBM has moved inexorably toward a Macintosh look and feel by adopting the mouse, the square pixel for displays, and the Presentation Manager windowing system. But significant differences still exist in the Macintosh's incorporation of fonts in the system software, the Macintosh Finder's flexible file management, the use of standard utilities (Chooser, Control Panel, Font/DA Mover, Clipboard, Scrapbook) that are shared by all applications, and the ability to network. Thus, IBM imitated much of the Macintosh's elementary functionality, but completely missed the subtleties of Macintosh style.

Break on Through to OS/2

IBM and Microsoft have drawn a distinct line across the spectrum of applications and declared that DOS is for single-user applications with limited memory requirements that can function independently (that is, without a network). For applications requiring more memory and the sharing of information and resources across a network, the only choice is OS/2.

The implication is that in order to get some of the standard benefits of the Macintosh system — addressing more memory, facilitating resource and information sharing — you have to graduate to OS/2, which requires a minimum of two megabytes of RAM and over five megabytes of disk storage. Desktop publishers fall into this category if they want to have the convenience factors offered by the Macintosh on the IBM platform.

The Macintosh system offers more benefits in its single-user, one megabyte RAM version, without requiring as much overhead. However, the Macintosh system has a weak link because it does not yet offer multitasking and interprocess communication, which are standard in OS/2. Thus OS/2 has a considerable advantage in the business market that is dominated by the technology of large corporate networks and minicomputers.

At this stage of development, OS/2 is not attractive unless your applications can benefit by corporate-wide use of the OS/2 Extended Editions for communications and data base management. IBM's Extended Editions are proprietary and therefore lock you into IBM's hardware, although a sizable clone universe will eventually meet the demand for less expensive and faster alternatives.

DOS users don't want to buy OS/2 until there are compelling applica-

tions, which are unlikely to emerge until the Presentation Manager comes out in 1989. IBM's recent listing of OS/2 applications included most of the favorite PC products and some workstation products, none of which will be available before 1989 (some not until late 1989). Why wait for OS/2 versions of PC products when you can run today's versions with programs like Desqview or Windows 386 on top of DOS?

Thus it seems that IBM can take advantage of the lull in innovation in the PC clone world, and push its line of high-end PS/2 computers with built-in mouse, VGA graphics, IBM-compatible networking, Presentation Manager on top of OS/2 (to be available by the end of this year), and a standard RAM configuration of two megabytes. If you need IBM-compatible computers for desktop publishing, and price is not as important as compatibility with future IBM offerings, then the high-end PS/2 computers (specifically the Model 70 or 80) are the only ones to buy. This kind of reasoning generates a large portion of IBM's sales.

With this strategy, and with a constant supply of low-cost DRAM

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The Macintosh permits the convenient storage of fonts, the use of the clipboard and scrapbook for data exchange, and standard connectors for hard disks and networks. These three convenience factors, along with a square-pixel display and resolution-independent printing technology, gave Apple its lead in desktop publishing.

chips, how can IBM lose? Perhaps their Achilles heel will come from underestimating the importance of convenience features for desktop publishing and presentations. We look forward to reviewing the OS/2 Presentation Manager to see if it is designed to at least equal, if not improve on, the visual interfaces that already lend themselves very well to desktop and network publishing.

Lead it out...

The Spring Computer Dealer Expo (Comdex) in Atlanta has been an important milestone marking our involvement in desktop publishing. In 1985 we officially announced our magazine, *Desktop Publishing*, at that show. One year later, again at the Atlanta Comdex, we celebrated the sale of *Desktop Publishing* to PCW Communications (publisher of this report) and the magazine's relaunch as *Publish!* magazine.

This year, the Spring 1988 Comdex has reached an all-time high in attendance and exhibitors, and has focused more on the concerns of its namesake constituents — dealers and value-added resellers (VARs) — than on the concerns of product vendors. However, the corporate buyers dominate the attendance of the exposition. These buyers understand that new technology will most likely render today's products obsolete, but they want to be prepared. The needs of dealers and corporate buyers seem to be on a collision course: buyers want healthier discounts from vendors and support from dealers, and dealers want higher profit margins and support to come from vendors.

The theme of this year's Spring Comdex was "business as usual," but with renewed pressure from dealers to stop vendor sales quotas. IBM is the biggest offender in this category, since its high quotas create too much inventory and prevent dealers from moving merchandise from other vendors, thus indirectly leading to more gray marketeering and smaller profit margins for dealers.

Dealers also want vendors to stop "preannouncing" products. Once again, IBM is the biggest offender with the OS/2 Presentation Manager, which many dealers view with skepticism because dealers are not happy with preliminary announcements that curtail sales and lead to inventory problems.

As for technology, dealers seem to not want it; they are primarily interested in improving the climate for business. Consequently, many dealers dislike Apple for its lawsuit against Microsoft and Hewlett-Packard, largely because it casts a cloud of doubt on Presentation Manager, and dealers want to see sunny days ahead, not clouds.

Thought For the Month

Petition the Developer with conferences... The tried-and-true method of getting developers to create products for a new system is to host a developer's conference and invite the press. What are these conferences like, and are they worth attending? Mostly they are informative and excellent for "schmoozing" (whether or not you like shrimp).

At a recent technical conference for Macintosh developers, one leading software developer compared the independent conferences to the ones Apple sponsors. Developers go to an Apple-sponsored developer's conference as if they expected an audience with the Pope, but instead they find

the Inquisition. At independent conferences, developers gather for an orgy of alternative solutions, but emerge later in the harsh light of reality with the understanding that Apple's solutions are the only alternatives.

Have a nice conference!



News Analysis

(continued from page 6)

Manhattan Graphics Ships ReadySetShow

The company that created the ReadySetGo! page layout program has produced a desktop presentation and 35mm slide making program with a familiar look and feel. ReadySetShow (\$495) extends the visual interface and paradigm of blocks for text and graphics so that ReadySetGo! users should have no trouble learning the new product.

The program provides full text and graphics manipulation with business charts and graphs, the ability to import a variety of graphics formats and position graphics on slides, full text editing and typesetting features, text search and replace, spell checking, style sheet control, slide show controls, and special effects for slides such as framing and drop shadows. ReadySetShow provides access to all 16.7 million colors available on the Macintosh II, simultaneously displaying the colors of two palettes (each with 256 colors), allowing mixing and storing of new colors and generating custom palettes.

The typesetting features include manual kerning, superscript and subscript control, leading control, and

the ability to change all type specs including font, size, style, and color either globally or for selected text.

ReadySetShow offers a shadow editor for adjusting the angle, the horizontal and vertical offset, fill pattern, and color, and a leader editor for customizing lists (such as bullet lists). You can drag pie slices in pie charts, and create graphs with pictorial elements in place of bars. The slide show controls let you specify wipes and special effects between slides.

Manhattan Graphics is also working on a version to run under Microsoft Windows on PC AT and compatibles as well as PS/2 machines with Presentation Manager. The company's PC version of the ReadySetGo! page makeup program, which also runs under Windows and Presentation Manager, is in testing and should be available before the end of this year. Letraset currently markets only Macintosh software, such as the Macintosh version of ReadySetGo! 4, and Manhattan Graphics markets the PC version.

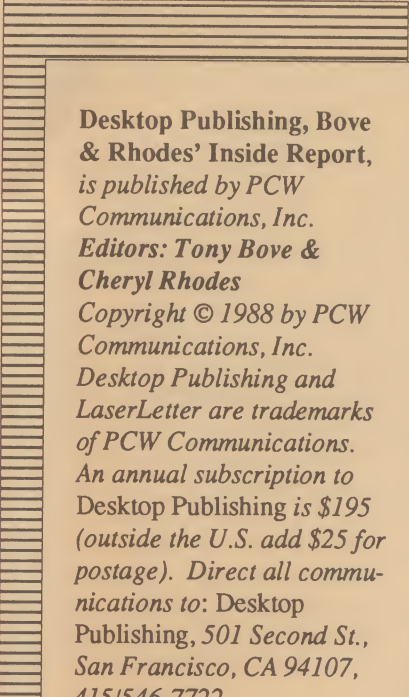
Adobe Systems Ships Illustrator 88

Adobe Illustrator 88 (\$495, upgrade \$100) shipped last month. The company added a freehand drawing tool similar to the tool of the same name in Aldus FreeHand, and an automatic image tracing tool that traces Bézier curves around closed images. Other new capabilities include automatic color separation and Pantone Matching System colors, the ability to show color on any type of color Macintosh II display, the ability to pour text along an irregular path, and a unique blending tool for graduated fills and special effects. Adobe's new version carries it to a level of functionality above the current level of Aldus FreeHand.

Opposition to AT&T/Sun Accord Under Fire

An echo of this year's political campaign is the intense political debate about the role Sun Microsystems is playing with the development of a new, standard version of AT&T Unix. A coalition of IBM, DEC, Hewlett-Packard, Apollo Computer, and others, calling itself the Open Software Foundation (OSF), opposes the AT&T/Sun agreement and proposes an alternate standard to Unix. However, industry analysts and third-party developers are suspicious of the coalition's motives, since most of its members derive profit from competing proprietary systems. One analyst, Stewart Alsop, referred to the OSF as "one of the biggest frauds perpetrated in the industry."

IBM and DEC, in particular, have never shown much interest in a standard Unix until AT&T and Sun started working on it. Sun's Bill Joy is a veteran of Unix unification attempts and was instrumental in developing



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the 4.3/4.2 BSD (Berkeley Standard Distribution) version of Unix in wide use today. Many industry analysts hailed AT&T's agreement as a major step in the right direction for Unix. However, opposition was growing right along with acceptance, with Apollo Computer, Sun's chief competitor, leading the coalition. The issue has been whether AT&T would help Sun gain a competitive advantage over other workstation vendors with a version optimized for the Sun-developed SPARC processor.

However, the issue may evaporate over time. Sun Microsystems has licensed its SPARC designs freely and buys SPARC chips for its own use from licensees. AT&T has a reputation for not showing special consideration to Unix licensees, so many analysts think the OSF is without a case. Sun stands to benefit anyway by being the first to offer the new Unix system, and the OSF has not shown any system that might be competitive. Perhaps the joke that OSF stands for the "OS/2 Foundation" is too close to the truth to be funny.

Novell Announces Macintosh NetWare

Novell and Dayna Communications are set to jointly announce NetWare for the Macintosh, which can connect more than forty different local-area networks including Ethernet, Starlan, Arcnet, and Token Ring networks. The features are similar to features in the DOS version of NetWare, a market leader in PC networking. Novell also offers a VAX VMS version of NetWare.

Microsoft Mail to Connect With VAX, MCI Mail

Included in the announcements of upgrades to its Macintosh product line (see feature article), Microsoft announced strategic alliances with Alisa Systems and Solutions Inc. to expand the capabilities of Microsoft Mail (formerly InterMail from Internet) to VAX electronic mail and to the worldwide MCI Mail service

and to Apple's AppleLink service.

Alisa Systems is working on a VAX version of Microsoft Mail that lets a VAX act as a mail server, storing and routing messages throughout an AppleTalk network. Solutions Inc. will provide gateways for sending and receiving messages with MCI Mail and AppleLink — such as the ability to add MCI Mail and AppleLink recipients to an address list available to all on a network.

Access Information

Adobe Systems, Inc., 1585 Charleston Road, P.O. Box 7900, Mountain View, CA 94039-7900. (415) 961-4400.

Aldus Corp., 411 1st Avenue South, Suite 200, Seattle, WA 98104. (206) 622-5500.

Alisa Systems Inc., 221 E. Walnut Street, Suite 230, Pasadena, CA 91101. (818) 792-9474.

Apple Computer Inc., 20525 Mariani Avenue, Cupertino, CA 95104. (408) 996-1010.

Ashton-Tate, 20101 Hamilton Avenue, Torrance, CA 90502. (213) 329-8000.

AST Research Inc., 2121 Alton Ave., Irvine, CA 92714. (714) 863-1333.

Barneyscan Corp., 1198 10th Street, Berkeley, CA 94710. (415) 524-6648.

Bitstream Inc., Athenaeum House, 215 First Street, Cambridge, MA 02142. (617) 497-6222.

BMUG, 1442A Walnut Street #62, Berkeley, CA 94709. (415) 549-2684.

Compugraphic Corp., 200 Ballardvale Street, Wilmington, MA 01887. (617) 658-5600.

Conographic Corp., 16802 Aston, Irvine, CA 92714. (714) 474-1188.

Cricket Software, 30 Valley Stream Parkway, Malvern, PA 19355. (215) 251-9890.

Dayna Communications Inc., 50 South Main Street, Salt Lake City, UT 84144. (801) 531-0600.

Digital Equipment Corp., Continental Blvd., Merrimack, NH 03054. (603) 884-5111.

Hewlett-Packard, 3000 Hanover Street, Palo Alto, CA 94304. (415) 857-1501.

IBM Corp., Information Systems Group, 900 King Street, Rye Brook, NY 10573.

(914) 765-3064 or (201) 358-5683.

Imapro U.S. Inc., P.O. Box 67, Suffern, NY 10901. (914) 368-2787.

Interleaf, Inc., 10 Canal Park, Cambridge, MA 02141. (800) 241-7700.

Laser Friendly, 930 Benecia Avenue, Sunnyvale, CA 94086. (408) 730-1921.

Letraset USA, 40 Eisenhower Drive, Paramus NJ 07653. (201) 845-6100.

Lightspeed, 47 Farnsworth Street, Boston, MA 02210. (617) 338-2173.

Linotype Company, 425 Oser Avenue Hauppauge, NY 11788. (516) 434-2000.

Manhattan Graphics Corp., 401 Columbus Avenue, Valhalla, NY 10595. (914) 769-2800.

Micrografx, Inc., 1820 N. Greenville Avenue, Richardson TX 75081. (214) 234-1769.

Microsoft Corp., 16011 NE 36th Way, Redmond, WA 98073. (206) 882-8080.

QMS, Inc., P.O. Box 81250, Mobile, AL 36689. (205) 633-4300.

Quark, Inc., 300 S. Jackson Street, Suite 100, Denver, CO 80209. (800) 543-7711.

Scitex America Corp., Eight Oak Park Drive, Bedford, MA 01730.

(617) 275-5150.

Solutions, Inc., Box 989, Montpelier, VT 05602. (802) 229-0368.

Sun Microsystems, Inc., 2550 Garcia Avenue, Mountain View, CA 94043. (415) 960-1300.

Unda Inc., 575 Madison Avenue, Suite 1006, New York, NY 10022.

(212) 605-0460.

Ventura Software, 1188 Padre Drive #201, Salinas, CA 93901. (408) 422-0500.

WordPerfect Corp., 288 W. Center Street, Orem, UT 84507. (801) 225-5000.

Xerox Corp., P.O. Box 24, Rochester, NY 14692. (800) 832-6979.